4.11 PUBLIC HEALTH AND SAFETY

The following presents a summary of an evaluation of potential impacts to public health and safety as a result of the proposed project. This evaluation was based on environmental conditions of the project site reported in several reports documenting site soil and soil gas investigations, remedial activities, and health risk assessments, made available for review by Lockheed Martin Corporation and the City of Burbank (see Appendix O for a list of documents reviewed).

4.11.1 EXISTING ENVIRONMENTAL SETTING

The project site is composed of two portions: the former Lockheed Martin Corporation Plant B-1 (inclusive of development parcels B-1 and B-199) and purchased properties along West Burbank Boulevard and North Victory Place in the southeast corner of the project site (Five Points intersection realignment and Lake Street Site Access). The following sections discuss the results of environmental investigations and remediation performed on these two portions of the project site.

Former Lockheed Martin Corporation Plant B-1

Past industrial activities associated with airplane and aerospace manufacturing have resulted in substantial contamination of the Plant B-1 portion of the project site by hazardous wastes, most notably solvents and metals. Significant subsurface investigation, sampling, and laboratory analyses have been completed at the Plant B-1 portion of the project site, commencing in 1983, as summarized in the 1999 Environmental Evaluation for the 100-acre Plant B-1 Parcel, prepared by Tetra Tech, Inc. and LORAX Environmental, Inc. for Lockheed Martin Corporation (Volume 1, Executive Summary in Appendix P). Results of these investigations indicated that elevated levels of volatile organic compounds (VOCs), in particular tetrachloroethylene (PCE) and trichloroethylene (TCE), were detected in soil and groundwater samples beneath the Plant B-1 portion of the project site. In addition, elevated levels of total petroleum hydrocarbons (TPH), heavy metals (CCR Title 22 persistent and bioaccumulative metals), semi-volatile organic compounds (SVOCs), and polychlorinated biphenyls (PCBs) have been detected.

On-site buildings at the former Plant B-1 site were demolished, and significant remediation was completed by Lockheed Martin Corporation. The ground surface currently consists of bare soil, which had been sealed for dust control with a product known as Soil Seal, as reported by Lockheed Martin Corporation (with the exceptions of dirt roads and trails, and a small asphalt parking lot located around the vapor extraction system [VES] treatment plant in the southeastern part of the former Lockheed Martin Corporation Plant B-1). The VES treatment plant is located outside of the development area for the proposed project.

Previous subsurface investigations indicated that the Plant B-1 portion of the project site is generally underlain by sands that are locally silty or gravelly with local silt layers, and fine grained materials (discontinuous clay lenses) at depths of 35 to 55 feet below ground surface (bgs) and below 115 feet bgs. Groundwater was reported in 1992 at depths of

approximately 120 feet bgs in the southeast portion and up to approximately 140 feet bgs on the west side of the Plant B-1 site. By 1997, the depth to groundwater was reported to be approximately 150 to 160 feet bgs as a result of extraction activities associated with groundwater remediation.

The Plant B-1 portion of the project site has been included in the State of California Environmental Protection Agency's Facility Inventory Data Base, a list of known contaminated sites promulgated under Section 65962.5(c)(3) of the California Government Code.

Plant B-1 Remediation Overview

The project site is located within the San Fernando Valley Groundwater Basin (SFVGB), which has provided water for domestic use through production wells. Four areas of the SFVGB have been impacted by the chlorinated solvents PCE and TCE, and by nitrates. Because of this impact, in 1986 the United States Environmental Protection Agency (USEPA) placed these areas on the National Priority List (NPL), which prioritizes identified contaminated sites requiring environmental cleanup. The project site is located within the Burbank Operable Unit (OU) of the North Hollywood NPL site. Lockheed Martin Corporation, the City of Burbank, Weber Aircraft, and others were identified by the USEPA as Responsible Parties (RP) for this groundwater impact and, in 1992, were required to participate in the groundwater cleanup plan for the OU, under a Consent Decree. As part of the Consent Decree, Lockheed Martin Corporation installed four groundwater extraction wells along the southern boundary of the Plant B-1 portion of the project site. Groundwater from these wells is pumped, collected and discharged through a collector pipeline to a treatment plant located approximately 1.5 miles west of the project site. In addition, Lockheed Martin Corporation has completed water quality analyses on samples from groundwater monitoring wells throughout the Plant B-1 portion of the project site and nearby areas, as reported in quarterly and annual groundwater monitoring reports.

The California Regional Water Quality Control Board, Los Angeles Region (LARWQCB), has been the lead regulatory agency and has provided oversight of environmental investigations, demolition, and remediation of the Plant B-1 portion of the project site. In most instances, the LARWQCB has issued "no further action required" (NFA) letters for areas within the Plant B-1 portion of the project site where hazardous wastes were detected and subsequently remediated to concentrations that are protective of significant further groundwater degradation. The NFA status applies to those areas where the LARWQCB determined that residual concentrations of chemicals following remedial action no longer pose a risk to groundwater. Completed and ongoing remediation efforts are described in detail below.

Former Lockheed Martin Corporation Plant B-1 Subarea Analysis

Numerous environmental investigations have been prepared for the Plant B-1 portion of the project site, which has been divided into three subareas: 1) the west approximately 14 acre section formerly occupied by the Building 175/180 (B-175/180) complex; 2) the central approximately 80 acre section formerly occupied by the B-1 Central plant (B-1 Central Subarea); and 3) the southeast approximately 13 acre section formerly occupied

by the Building 199 (B-199) complex. Subarea boundaries are depicted on Figure 4.11.1.

The following summarizes the results of these relevant environmental investigations, health risk assessments, and remedial activities for the three subareas of the project site. The current status of regulatory compliance by the LARWQCB with respect to groundwater impacts of the Plant B-1 portion of the project site is also provided.

Building 175/180 Subarea

Elevated levels of PCE and other VOCs were detected in samples of soil and groundwater beneath this subarea during investigations commencing in 1984 as part of a Plant B-1 sitewide underground storage tanks (UST) investigation. The elevated VOCs were detected primarily in the northwest and central portions of this section. A VES was installed in 1987/1988 to extract and treat VOC laden vapors from the soil beneath this area. This VES was integrated with a groundwater extraction and treatment facility (called the Aqua-Detox unit), which operated until 1994 when the LARWQCB gave conditional permission to cease its operation and dismantle this facility. However, as part of the conditional approval, the LARWQCB stated that the vapor and groundwater wells should remain open for possible future use.

Building 175 and adjacent facilities were demolished in 1991. Building 180 and adjacent facilities were demolished by 1995. Near surface soil identified as containing elevated levels of VOCs was removed during building demolition. Other excavations and backfills have been completed over several years (see discussion in Section 4.3, Geotechnical Conditions). In 1996, additional VOC and TPH impacted soil near the former location of clarifier B-1-ZB in the northwest corner of the former location of Building 175 was excavated to depths ranging between approximately 18 feet and 70 feet bgs.

Tait Environmental Management, Inc. (TEM) conducted an environmental review of Lockheed Martin Corporation's site assessment, demolition, and remedial work on the western 30 acres of the site, which included the Building 175/180 14-acre subarea, in 1997/1998. TEM recommended that a soil gas vapor investigation be performed at depths of ten feet bgs, as the past soil gas vapor investigation conducted by ICF Kaiser Engineers in 1994 (Sitewide Soil Vapor Investigation Report, Commercial Redevelopment Program for Plant B-1, ICF Kaiser Engineers, May 13, 1994, Volumes 1-3) determined vapor concentrations from depths of 20 feet bgs and deeper. TEM conducted five days of soil gas investigation from January 14, 1998, to January 20, 1998 (Final Report, Soil Gas Survey of Kilroy Parcel, Lockheed Martin Plant B-1,

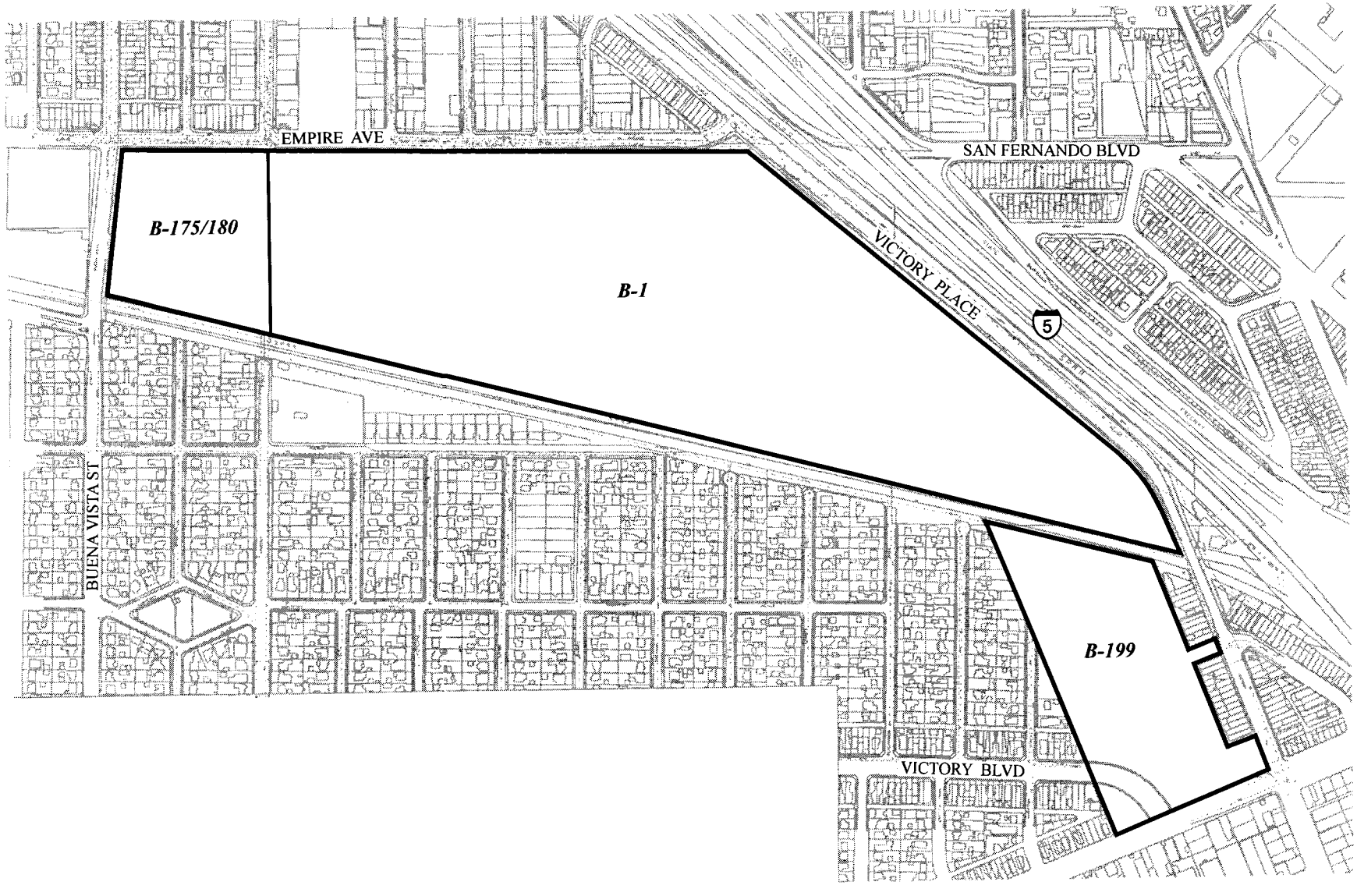

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Figure 4.11.1

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LSA No Scale

Lockheed Martin
Plant B-1 Subareas

1750 Empire Avenue, Burbank, California, Tait Environmental Management, Inc., January 27, 1998). TEM concluded that the northwest corner of the 30 acre parcel had elevated concentrations of PCE in soil vapors collected from 10 feet bgs.

The concentrations of PCE detected in soil gas during TEM's investigation were located near the former location of clarifier B-1-ZB in the northwest corner of the former location of Building 175.

Tetra Tech, Inc. conducted a soil and soil gas vapor investigation in 1998 to verify the presence and determine the lateral extent of volatile organic compounds (VOCs), including PCE, in the upper 20 feet of the site near the northwest corner of the former location of Building 175 (Final Report, Former Building 175, Limited Site Investigation, Burbank, California, Tetra Tech, Inc., April 3, 1998). Tetra Tech, Inc. collected soil gas from depths of 5, 10, 15 and 20 feet bgs from 19 locations.

Based on the results of both TEM's and Tetra Tech's soil gas investigations, Tetra Tech, Inc. collected soil samples from depths of 5, 10, 15 and 20 feet bgs at seven locations, the locations that had the greatest detected concentrations of PCE in soil vapor.

The results of Tetra Tech's soil gas investigation indicated that PCE, TCE, 1,2-Dichloroethane, Freon 113, and 1,1,1-Trichloroethane were detected. PCE was detected at the greatest concentration and with the most frequency. The greatest detected concentration of PCE in soil gas at 5 feet bgs was 1133 micrograms per liter (Fg/L), at 10 feet bgs was 2007 Fg/L, at 15 feet bgs was 2440 Fg/L, and at 20 feet bgs was 2775 Fg/L. These detected concentrations of PCE were collected from the northwest corner of the former location of Building 175, the approximate location of the former site of clarifier B-1-ZB.

The results of Tetra Tech's soil investigation indicated that PCE was detected in four soil samples at concentrations ranging from 9 to 1900 micrograms per kilogram (Fg/kg). The greatest detected concentration of PCE, 1900 Fg/kg, was detected from the soil where the greatest concentrations of PCE were detected in soil vapor at depths of 10, 15 and 20 feet bgs, from the northwest corner of the former location of Building 175. Tetra Tech, Inc., recommended no further assessment or further action based on these results.

Cleanup Status

After remediation on the B175/180 subarea was complete and based upon the results of sampling and analyses, the remaining levels of VOCs and TPH were not considered by the LARWQCB to represent a substantial threat for significant further groundwater degradation. The LARWQCB issued NFA letters for this subarea in January and May of 1997 with respect to the Well Investigation Program. All wells associated with the Aqua-Detox treatment system were abandoned in May and June of 1998 (EMCON, 1998; Lockheed Martin Corporation, August 12, 1998). The EMCON (1998) report of abandonment of these wells was submitted to the LARWQCB on August 12, 1998 (Lockheed Martin Corporation, August 12, 1998). According to the letter from Lockheed Martin Corporation (Lockheed Martin Corporation, August 12, 1998) to the LARWQCB, EMCON followed the well abandonment procedures described in

Lockheed Martin Corporation's letter to the LARWQCB dated April 23, 1998 (Lockheed Martin Corporation, April 23, 1998)

B-1 Central Subarea

Commencing in 1983, significant subsurface investigation, sampling, and laboratory analyses have been undertaken in this subarea, including soil borings and groundwater well installation and monitoring. The results of investigations indicated that elevated levels of VOCs, in particular PCE and TCE, were detected in soil and groundwater samples primarily from the central portion of this subarea. In addition, analytical results have detected elevated levels of TPH affected soil in the central and eastern portions of this subarea; heavy metals (lead, cadmium, copper, chromium and zinc) were detected in near surface waste fills in the central portion of this subarea; and low levels of PCBs were detected in near surface soils in localized areas within this subarea.

Demolition of the buildings and adjacent facilities in the B-1 Central Subarea occurred between 1991 and 1994. Prior to demolition, the subsurface structures (e.g., sumps, clarifiers, etc.) within the subarea were removed and transported off site. In addition, underground storage tanks (USTs) that contained either diesel or cutting oil were removed.

Highly contaminated soils and other wastes were removed from the B-1 Central Subarea during demolition. In general, excavations were continued in areas of visually impacted soils until confirmational sampling and analyses indicated that low levels of chemicals remained in the soil. Depths of excavation are described in Section 4.3 of this EIR.

Approximately 27,000 cubic yards of soil generated during demolition activities containing relatively low levels of hydrocarbons were stockpiled within a geomembrane in the extreme west portion of the B-1 Central Subarea. Although the LARWQCB gave a conditional approval for spreading this stockpiled soil during the initial phase of the grading for the proposed project, this soil and geomembrane were removed from the project site in 1996.

In addition, Lockheed Martin Corporation has installed four groundwater extraction wells along the southern boundary of the Plant B-1 portion of the project site. There are other groundwater monitoring wells on the project site, as shown on Figure 4.11.2.

A baseline health risk assessment was conducted by ICF Kaiser Engineers and included in a report dated March 28, 1994, for this subarea (Baseline Health Risk Assessment, Commercial Redevelopment for Plant B-1, ICF Kaiser Engineers, March 28, 1994, volumes 1-2) to evaluate whether remediation was needed based on the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) health risk

EW-1S
EW-1M
EW-1D
EW-2S
EW-2D
EW-1
B-1-CW04
B-1-CW05
EW-3S
EW-3D
B-1-CW25
B-1-CW26
B-1-CW27
V04
OW-V04
V03
OW-V03
B-1-CW22
B-1-CW23
B-1-CW24
PEW-1
V02
OW-V02
B-1-CW29
OW-V01-W
V01
B-1-CW08
B-1-CW09
OW-V01
B-1-CW10
B-1-CW11
B-1-CW12

EMPIRE AVENUE
INTERSTATE 5
VICTORY PLACE
VICTORY BLVD.
BUENA VISTA BOULEVARD

LEGEND:

⊠ Observation/Monitoring Well

◐ Extraction Well

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Figure 4.11.2

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LSA

Scale in Feet

0 200 400

Approximate Location of Groundwater Extraction and Monitoring Wells

criteria. The baseline health risk assessment was prepared to assess potential risks to human health and the environment, assuming a variety of redevelopment scenarios, including commercial usage as envisioned at that time. The baseline health risk assessment used soil data collected during the demolition activities, and did not use data generated during remedial actions that were conducted concurrent with the preparation of the March 28, 1994, baseline health risk assessment. The baseline health risk assessment evaluated potential health risks to construction workers during redevelopment activities and to on-site office workers post-development. The baseline health risk assessment did not evaluate the potential impacts to human health of redevelopment construction activities on human health or post-development site uses to off-site receptors.

The results of the assessment indicated that the total health risk via all exposure pathways evaluated (i.e., soil ingestion, dermal contact, and inhalation) to construction workers was $8x10^{-5}$, or 8 in 100,000. The greatest impact calculated was from the inhalation of PCE vapors.

The baseline health risk assessment evaluated the post-development potential health risks to on-site commercial office workers by dividing the parcel into three areas of concern and calculating risk for the inhalation route of exposure only.

One area of concern had an estimated risk of $1.2x10^{-5}$. This risk was due to exposure to PCE in indoor air in a theoretical future office development on the site. PCE and vapors from other volatile organic compounds were assumed to enter the building through cracks and expansion joints in the building's foundations, based on the results of a fate and transport model used by ICF Kaiser Engineers. Based on this baseline health risk assessment, ICF Kaiser Engineers identified area of concern A-2 (see Figure 4.11.1) as requiring remediation of PCE impacted soils. Consequently, the VES was constructed over ten acres of the most heavily contaminated portion of A-2. As of August, 1999, the VES has been operating for almost two years of its projected lifespan of 8.5 years, and is described in detail in the next section.

The March 28, 1994, baseline health risk assessment prepared by ICF Kaiser Engineers was submitted to California EPA, Department of Toxic Substances Control (DTSC) and the LARWQCB for review. Based on regulatory agencies' comments, an Addendum to the baseline health risk assessment was prepared on August 18, 1994, by ICF Kaiser Engineers (Addendum I, Baseline Health Risk Assessment, Commercial Redevelopment for Plant B-1, ICF Kaiser Engineers, August 18, 1994, volumes 1-2). The Addendum included additional data that had been collected from the site in the recalculated risk calculations. The data represented the soil analytical results collected during the remedial actions that occurred during the preparation of the March 28, 1994, baseline health risk assessment. The Addendum also included additional chemicals of concern, which were added pursuant to DTSC's request, in the risk calculations. The estimated risk values presented in the Addendum baseline health risk assessment dated August 18, 1994, were the same as the estimated risk values presented in the baseline health risk assessment dated March 28, 1994.

ICF Kaiser Engineers conducted a soil vapor survey inclusive of the Plant B-1 Central and Building 175/180 Subareas of the site (Sitewide Soil Vapor Investigation Report, Commercial Redevelopment Program for Plant B-1, ICF Kaiser Engineers, May 13, 1994, volumes 1-3). ICF Kaiser Engineers concluded that the lateral and vertical extent

of VOC contamination on the B-1 Central subarea of the site was delineated. This delineation shows the VOC contamination consists of three distinct plumes confined to the center area of B-1 Central (identified by ICF Kaiser Engineers as area of concern A-2). Furthermore, ICF Kaiser Engineers concluded that the greatest detected concentrations of PCE, the compound identified by ICF Kaiser Engineers as the most prevalent VOC detected in soil gas at B-1 Central, were in the fine grained materials (discontinuous clay lenses) between 35-55 feet bgs and below 115 feet bgs.

Vapor Extraction System (VES)

ICF Kaiser Engineers conducted a feasibility study to evaluate technologies to remediate the VOCs remaining in area of concern A-2. ICF Kaiser Engineers recommended a VES consisting of an underground vent field (approximately 200 soil vapor extraction wells) connected to an underground piping manifold system; a treatment plant using a regenerative activated carbon adsorption system; a 50 foot high exhaust stack (subsequently limited to 35 feet); and an underground air injection well system. The soil characteristics of the approximately ten acres of the most heavily contaminated portion of the Plant B-1 parcel on which the VES was constructed are documented in a report prepared by ICF Kaiser Engineers, titled Soil Vapor Extraction Pilot Test Report, dated March 8, 1995.

The Soil Vapor Extraction Pilot Test Report (ICF Kaiser Engineers, March 8, 1995) characterized the subsurface of the site by zones based on lithology and depth. Zone C was identified by ICF Kaiser Engineers as consisting of fine grained materials (discontinuous clay lenses) approximately 35-55 feet bgs. ICF Kaiser Engineers determined during this pilot test that the VOCs were easily extracted from the zone immediately above zone C (zone D, characterized as the shallowest coarse grained unit extending from below the fill to 35 feet bgs) and then from the two zones immediately below zone C (zones B and A). The coarse grained unit immediately below zone C extends from 55-115 feet bgs, and was divided by ICF Kaiser Engineers into an upper (zone B) and lower (zone A) zone. The last zone identified by ICF Kaiser Engineers was the zone extending from 115 feet bgs to the level of groundwater in 1995, 140 feet bgs: the deep zone. The deep zone is also composed of fine grained material from which ICF Kaiser Engineers experienced difficulty in extracting VOCs.

The results of ICF Kaiser Engineer's pilot study vapor extraction tests indicate that the concentrations of PCE, TCE, and other VOCs decreased markedly with extraction time. The concentrations then rebounded to values equal to or higher than those detected near the start of the extraction tests during the pilot study. This rebound effect was most pronounced in the finer grained zones.

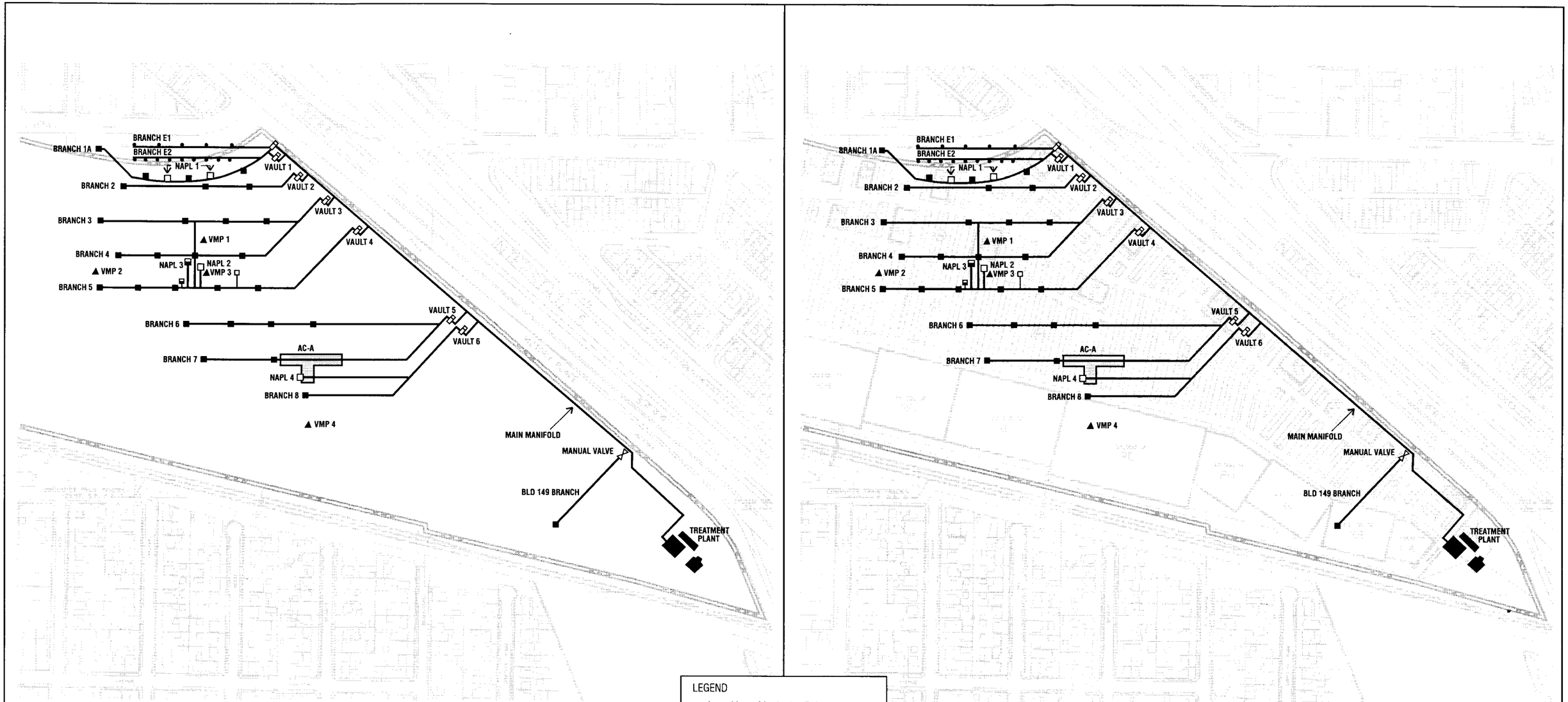
A Final EIR (FEIR) for the VES was certified, and Conditional Use Permit (CUP) 94-13 for the VES was issued by the City of Burbank in December, 1995 (focused EIR; Proposed Lockheed Vapor Extraction System, City of Burbank, October, 1995, on file at the office of Mr. Roger Baker, City of Burbank City Hall, Community Development Department). It was estimated in the FEIR that, in order to remediate the VOCs in this area, the VES will need to be operated for approximately 8.5 years.

As part of CUP 94-13, the City of Burbank issued several conditions of approval, including 1) the total VOC emission from the VES shall not exceed 9.8 pounds per day;

2) an emergency response plan shall be submitted (to the satisfaction of the Fire Chief); and 3) Lockheed Martin Corporation shall ensure that exposure to the community from construction activities does not exceed acceptable levels (i.e., excess cancer risk is less than one in a million), as required by the DTSC.

As required by the DTSC, the FEIR included a requirement to prepare a health and safety plan for worker protection during construction of the VES. In 1996, Earth Tech prepared a general Safety Plan for the installation of the VES. The Safety Plan addressed the physical hazards (safety) and risks for chemical exposure to personnel during the construction of the VES. The Safety Plan identified chemicals that have been detected in the subsurface at the project site, including results of a vapor survey to estimate concentrations of total VOCs anticipated in shallow excavations (up to 16 feet bgs) around the VES vent field. The vapor survey results indicated generally low levels of total VOCs, with moderated levels of total VOCs in the northwest portion of the vent field. The Safety Plan recommended that Task Specific Health and Safety Plans (Task Specific HASPs) be prepared (by the individual contractors) for each hazard that might be encountered during individual work elements for the VES installation. Each hazard should be accompanied by a work procedure or control method that eliminates or reduces employee exposure to levels below the established occupational exposure limits (OELs) to meet permissible exposure limits (PELs). The Safety Plan included provisions for monitoring air quality within, around the perimeter, and outside of the controlled work area, as well as emergency response procedures.

The VES was installed in 1996/1997 and commenced operation in September, 1997. As depicted in Figure 4.11.3, the vent field consists of vertical and slanted clusters of perforated pipes installed in the central portion of this section. Some of the deepest vents were extended into the groundwater to accommodate a new vadose zone that could be created by a drop in the groundwater level, i.e., if the groundwater level drops, an additional zone of soil that may contain residual concentrations of VOCs left by the retreating groundwater may be created, as a result of the extraction and treatment of the water by the Burbank Operable Unit Water Treatment Plant. The vent field for the VES consists of 217 vents, arranged in 39 well clusters, which are joined through 17 branch lines through which the extracted vapors are drawn to the treatment plant. In addition, there are four vapor monitoring points (similar to wells) installed between the branch lines, and an aeration cell in the south central portion of the vent field. The well clusters and branch lines were installed in bottoms of trenches that were excavated approximately 30 feet wide and 10 feet deep bgs. The trenches were backfilled with clean soil that was compacted after the installation of the well clusters



Source: Earth Tech, 11/97.

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Figure 4.11.3

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LSA

Scale in Feet

0 200 400

Vapor Extraction System Layout

and branch lines. The branch lines pass through six concrete valve vaults, which are located along the south side of Victory Place. The tops of these vaults, the vapor monitoring points, and the aeration cell are near the existing ground surface.

The branch line manifold piping is joined to an underground, main manifold piping system that trends along the south side of Victory Place. The treatment plant and exhaust stack are located on the southeast tip of this subarea.

As with much of the B-1 Central Subarea, the vent field and branch lines were installed in an area where the near surface chemically impacted fill and native soils were removed during demolition activities and the excavations were backfilled with clean soil and compacted.

As reported in January, 1998, the VES operated approximately 50 percent of the time during the start-up period. The results of monitoring and analyses of vapor samples collected from the effluent of the VES indicate that VOC emissions from the VES were significantly below the maximum allowed (9.8 pounds per day). Based on the analytical results of the vapor samples, Alton Geoscience, Inc. and Clayton Environmental Consultants (the City of Burbank consultants) concluded that the excess cancer risks from operation of the VES are less than one in one million both for workers and residents under the hypothetical 70 year lifetime and 8.5 year VES operating period risk assessments (Status Report of Vapor Extraction System Operation - Lockheed Martin B-1 Site - Third Quarter 1999 [June-August] - Revision, Clayton Environmental Consultants, November 1, 1999; Status Report of Vapor Extraction System Operation - Lockheed Martin B-1 Site - Fourth Quarter [September-November] 1999, Clayton Environmental Consultants, November 23, 1999).

The influent data show the concentrations of PCE, TCE, and other VOCs as measured at the vapor monitoring points along the extraction piping decreased markedly within two months of initiation of VES operations (The Ventfield Progress Report, First and Second Quarters 1998, Lockheed Martin Corporations Plant B-1 VES System, Earth Tech, 1998; The Vent Field Progress Report, Third and Fourth Quarters 1998, Lockheed Martin Corporations Plant B-1 VES System, Earth Tech, 1999). These data mirror the effluent emissions data posted on the City website (http://burbank.acityline.com/city/ves/brmon.htm), which also show a marked decrease in the mass of PCE, TCE, and other VOCs emitted from the VES per day within the first four months of VES operations.

The VES, currently operating on the property, will continue to operate while the LARWQCB is petitioned for closure by Lockheed Martin Corporation and will remain in operable condition during rebound sampling, as required by the LARWQCB, in order for closure to be granted by the LARWQCB (see the projection description).

Cleanup Status

In 1997, the LARWQCB granted partial closure to the entire Plant B-1 site, including the B-1 Central Subarea, with the exception of the impacted soil being remediated by the VES. The LARWQCB stated that they have no further requirements for the B-1 Central Subarea, except for the remediation by the VES. Also, as a condition of this partial closure, the LARWQCB is to be notified if evidence of soil contamination is encountered during redevelopment of the project site. The LARWQCB's review of such a reported

incident may trigger additional investigation, appropriate actions, and/or follow-up, depending on the extent of contamination, if any. Standard Regulatory Requirement 11.1 - Health and Safety Plan requires air and soil monitoring for the protection of construction workers, notification procedures, preparation of emergency response plans, extent of contamination determination and remediation, if required, if such contamination is encountered during development of the project site (see Section 4.11.2 - Standard Regulatory Requirements).

Aeration Cell

An aeration cell was constructed by Earth Tech to contain and remediate soils contaminated with VOCs generated during drilling and trenching for installation of the VES (Closure Report Aeration Cell AC-a, Lockheed Martin Corporation Plant B-1 SVE System, Earth Tech, January 18, 1999) on Plant B-1 Central subarea. The aeration cell consists of an extraction manifold at a depth of approximately 15 feet bgs and an injection manifold connected to the VES plant. Soil placed inside the aeration cell for treatment was enclosed in a geosynthetic liner to separate it from surrounding soils. Extraction from the aeration cell occurred during the startup and testing of the VES (from July 16, 1997 through April, 1998).

Operation of the aeration cell was discontinued on April 16, 1998, after sampling and analysis of soil gas indicated the concentrations of PCE had declined to low asymptotic concentrations, i.e., concentrations that indicate equilibrium was reached, of 13 Fg/L. During the start up of the aeration cell, PCE was detected at concentrations of 3900 Fg/L. TCE was detected at start up of the aeration cell at concentrations of 36 Fg/L and was detected at an asymptotic concentration of 1.4 Fg/L on April 16, 1998.

Extraction from the aeration cell was temporarily resumed on October 8, 1998, in order to collect vapor samples. PCE was detected in samples collected from this temporary extraction at concentrations of 13 Fg/L after three minutes of operation and 10 Fg/L after eight minutes of operation. TCE was not detected in concentrations greater than the laboratory detection limits of 1 Fg/L in either sample.

Earth Tech submitted a letter request for closure of the aeration cell to the LARWQCB on January 22, 1999, and is waiting for the LARWQCB's decision. Earth Tech indicates that, upon LARWQCB's concurrence for closure, the aeration cell will be abandoned by capping the vapor extraction piping inside the well vault, removal of the upper piping inside the aeration cell, and capping all other existing piping.

Building 199 Subarea

Hazardous waste and material storage areas and USTs were reported to exist in the north and northeast corners of the B-199 Subarea. Elevated levels of TCE, toluene, and other VOCs were detected in samples of soil beneath this area during investigations commencing in 1990. Elevated levels of TCE, PCE, and other halogenated VOCs were detected in groundwater samples collected beneath this subarea; however, these constituents were reportedly detected at significantly higher levels in upgradient wells to the northwest of this subarea. Building 199 and adjacent facilities were demolished in 1996. Relatively low levels of TPH were detected in soil samples collected during

removal of the USTs. Analysis from samples collected from soil borings drilled after removal of these USTs indicated either non-detectable or low levels of VOCs or TPH beneath the USTs. Removal of near surface soil identified as containing elevated levels of VOCs was also accomplished during building demolition.

Cleanup Status

In 1997, the LARWQCB granted partial closure to the entire project site, including the B-199 Subarea. No further action is required by the LARWQCB with respect to preventing further degradation of groundwater beneath the B-199 Subarea.

The Covenant and Agreement to Restrict Use of Property

Lockheed Martin Corporation has prepared a Covenant and Agreement to Restrict Use of Property, an environmental restriction pursuant to California Civil Code Section 1471. This Covenant and Agreement to Restrict Use of Property restricts the development, use, and conveyance of the property (see Article 2) such that the following structures are prohibited from being constructed on the property: 1) residences(s), 2) hospital for humans, 3) a school for persons under 21 years of age, 4) day-care center, 5) and any permanently occupied human habitation used for purposes other than business or industrial. Furthermore, the Covenant and Agreement to Restrict Use of Property restricts the development, use, and conveyance of the property (see Article 2) such that "no owner or occupant of this property or other party having custody or control of this property by any means shall excavate, grade, dig, drill or bore the soils in, on or under the property to a depth below ten feet below finished grade. . ." (Covenant and Agreement to Restrict Use of Property, Article 2).

Assessment of Potential Health Impacts due to Exposure to Residual Concentrations of Chemicals On Site

As the baseline health risk assessment and the Addendum to the baseline health risk assessment prepared by ICF Kaiser Engineers in 1994 addressed potential human health risks due to exposure to chemicals in soils from the 80 acre Plant B-1 Central Subarea of the Lockheed Martin Corporation 100 acre parcel only, and as these risk assessments did not use residual concentrations of chemicals detected in soils post-remediation, a screening evaluation of residual concentrations of chemicals detected on the entire 100 acre parcel was completed by Lockheed Martin Corporation's consultants (1999 Environmental Evaluation for the 100-acre Plant B-1 Parcel, Tetra Tech, Inc. and LORAX Environmental, Inc., July 9, 1999, Volumes 1-4).

The data assessed in the screening evaluation encompassed soil data collected from the site during many different investigations, assessments and confirmation sampling for remedial actions conducted by many different consultants from 1991 to 1996.

Based on this screening evaluation, it was determined that additional soil gas and soil data collected from the entire 100-acre Plant B-1 parcel would be useful in assessing the potential health impacts due to exposure to residual concentrations of chemicals detected on site in 1999.

A soil gas survey, limited soil sampling, and analysis for total and hexavalent chromium were conducted on-site in October and November, 1999. The work conducted on-site is summarized in the Work Plan, Plant B-1 Soil Gas Survey, and Hexavalent Chromium Soil Investigation, dated September 7, 1999 (Tetra Tech, Inc.).

Soil gas probes were installed at a total of 105 site locations during this investigation. Soil gas probes were installed at depths of 5, 10, and 40 feet bgs, depending upon the anticipated future use of the site and the zone of influence of the VES. The probes installed to a depth of 40 feet bgs were placed inside Development Option A proposed building footprints and within the VES zone of influence. These probes were sampled while the VES was shut down for rebound testing, as were selected probes at depth of 5 and 10 feet bgs.

Five of these soil gas probes were placed at the same coordinates and depths where soil gas probes placed by ICF Kaiser Engineers (Sitewide Soil Vapor Investigation Report, Commercial Redevelopment Program for Plant B-1, ICF Kaiser Engineers, May 13, 1994 volumes 1-3) detected high concentrations of PCE (13,820 Fg/L to 30,852 Fg/L) at depths between 35 and 55 feet bgs. These soil gas probes, placed by ICF Kaiser Engineers, were placed in the fine grained materials (discontinuous clay lenses) in the center of the B-1 Central Subarea of the site. Placement of probes during this site investigation at these same coordinates provided soil gas data of soil vapors within the discontinuous clay lenses.

PCE was the most frequently detected VOC, and was detected in the greatest concentrations during this soil vapor survey conducted in October and November, 1999. The detected concentrations of PCE were typically less than 25 Fg/L except for the following: 1) the soil gas probes placed at the former location of clarifier B-1-ZB at the northwest corner of the former location of Building 175 (PCE was detected at 5 feet bgs at a concentration of 1463 Fg/L and at 10 feet bgs at concentrations of 59 Fg/L and 2682 Fg/L); 2) soil gas probe SG42 at a depth of 40 feet bgs (PCE was detected at a concentration of 1368 Fg/L); and 3) soil gas probes SG101 and SG103 at depths of 52 and 47 feet bgs, respectively. PCE was detected at concentrations of 22,138 Fg/L at SG101 and 25, 391 Fg/L at SG103. The results of the soil gas survey are presented in the Plant B-1 Soil Gas Survey, Tetra Tech, Inc. report (December 21, 1999).

The soil vapor samples collected from SG42, SG101, and SG103 did not provide sufficient data to confirm that the maximum rebound concentrations of PCE, i.e., concentrations that indicate equilibrium was achieved, were reached during this investigation (Site Characterization and Risk Evaluation, Tetra Tech, Inc., December 23, 1999).

The soil sampling and analysis for total and hexavalent chromium were limited to those areas on site where chromium was used, stored, or disposed of during historic operations, i.e., near Buildings 111 and 112 and Area H (Work Plan, Plant B-1 Soil Gas Survey and Hexavalent Chromium Soil Investigation, Tetra Tech, Inc., September 7, 1999). Soil samples were collected from immediately beneath the fill, which ranged from a depth of 4 feet to 12 feet bgs, and from depths that ranged from 10 to 16 feet bgs in areas where the potential for excavations for placement of the utilities for the proposed future redevelopment options may exceed 10 feet bgs.

Twenty soil samples were submitted for analysis of total and hexavalent chromium. Nineteen of the twenty soil samples had detected concentrations of hexavalent chromium greater than the detection limit of 0.20 milligrams per kilogram (mg/kg). The results of the soil sampling and analysis investigation for total and hexavalent chromium are presented in the Hexavalent Chrome Soil Investigation, Tetra Tech, Inc. report (December 20, 1999).

Tetra Tech, Inc. prepared a Site Characterization and Risk Evaluation report (December 23, 1999) summarizing current environmental site conditions and evaluating the potential for the residual concentrations of chemicals detected on site to pose a health impact to construction workers during construction activities associated with redevelopment activities and to future on-site occupants, upon completion of redevelopment.

Tetra Tech, Inc. implemented a screening process when evaluating the potential for residual concentrations of chemicals detected on site to pose an impact to the health of construction workers and future site occupants. The U.S. Environmental Protection Agency (USEPA) Region IX Preliminary Remediation Goals (PRGs) for industrial soil and the California Environmental Protection Agency (Cal-EPA) PRGs (USEPA 1998, 1999) were used as the screening criteria for the residual concentrations of metals detected in soil at 10 feet bgs or shallower. If the residual concentrations of metals at 10 feet bgs or shallower exceeded the Cal-EPA PRG, or in those cases where a Cal-EPA PRG has not been published, the USEPA PRG for industrial soil, then the area was excavated, the soil with the elevated concentrations of metals was disposed of appropriately, the excavations were lined with a geosynthetic liner, and backfilled with clean imported crushed rock and clean fill and compacted to rough grade (Site Characterization and Risk Evaluation, Tetra Tech, Inc., December 23, 1999).

In order to assess the potential for residual concentrations of chemicals to pose a potential health impact, an exposure pathway must be complete. An exposure pathway is the mechanism whereby a human receptor may be exposed to residual concentrations of chemicals. The four elements of a complete exposure pathway are: 1) a source of chemical release, such as a spill; 2) a mechanism of release through a transport medium or media, such as migration through soil into indoor air; 3) a point of contact between the potential receptor and the transport medium or media, such as ingestion, inhalation, or dermal contact; and 4) a potential receptor, such as a construction worker or future on-site office worker. If any one of these four elements is missing, the exposure pathway is incomplete. Only complete exposure pathways may result in exposures of residual concentrations of chemicals to humans that may cause an impact to human health.

Twenty-one locations with the approximate dimensions of three feet wide by eight feet long and of various depths (the depths varied from 6 feet bgs to 12 feet bgs) were excavated on December 14 and 15, 1999. As the residual concentrations of metals that exceeded the screening criteria have been removed from the site, the exposure pathway whereby the potential for the health of the construction workers during redevelopment activities to be impacted due to exposure to residual concentrations of metals in soil on site is incomplete.

Risk based concentrations, derived by Tetra Tech, Inc. (Site Characterization and Risk Evaluation, Tetra Tech, Inc., December 23, 1999) were used as the screening criteria for residual concentrations of Aroclor 1248 and Aroclor 1254 in soil at depths of 3.5 feet bgs or shallower and concentrations of PCE and TCE detected during the October,

November 1999 soil gas survey (Plant B-1 Soil Gas Survey, Tetra Tech, Inc., December 21, 1999).

The residual concentrations of Aroclor 1248 and Aroclor 1254 in soil at depths 3.5 feet bgs or shallower are less than the risk based concentrations derived by Tetra Tech, Inc. Therefore, these residual concentrations of Aroclor 1248 and Aroclor 1254 do not pose an impact to human health to the construction workers during redevelopment activities, or to future site occupants after the site has been redeveloped.

The concentrations of PCE and TCE detected at 5, 10, and 40 feet bgs during the soil vapor survey conducted in October and November, 1999, are less than the risk-based concentrations derived by Tetra Tech, Inc. Therefore, these concentrations of PCE and TCE do not pose an impact to human health to the construction workers during redevelopment activities, or to future site occupants after the site has been redeveloped.

Vapor barriers (composed of 60 mil thick HDPE with four inch thick sand beds) and associated vent piping (composed of four inch diameter HDPE vent pipe with perforations at a minimum of five percent of the open area placed in the center of vent trenches a minimum 12 inches wide by 12 inches deep) will be placed on top of the locations of soil gas vapor probes SG101 and SG103 (the locations of the greatest detected concentrations of PCE on site during these investigations) prior to slab on grade or pavement construction. The vapor barriers must be installed according to the manufacturer's recommendations by a qualified contractor. All concrete cold joints will be caulked with Sika 1A. The dimensions of these vapor barriers will be 8,250 square feet (SF). The vapor barrier placed on top of SG101 will conform to the building footprint identified as R-11 on development option D1-C. The vapor barrier placed on top of SG103 will be rectangular in shape with SG103 located at the center of the vapor barrier (see the project description).

Placement of the vapor barrier on top of SG101 will also encompass SG42 (the location that had detected concentrations of PCE that had not yet reached equilibrium during this investigation).

Vapor barriers have been used since the 1970s to protect buildings, structures, and occupants of these buildings and structures from combustible soil gas (Sepich, December 20, 1999). The State of California Integrated Waste Management Board requires vapor barriers underneath buildings and structures where combustible soil gas has been detected, as stipulated in Title 27 of the California Administrative Code and Section 110 of the Los Angeles County Building Code (Sepich, December 20, 1999).
These vapor barriers will eliminate any exposure pathway for volatile compounds, including PCE, to be transported to future site occupants, regardless of future concentrations of volatile compounds at these locations.

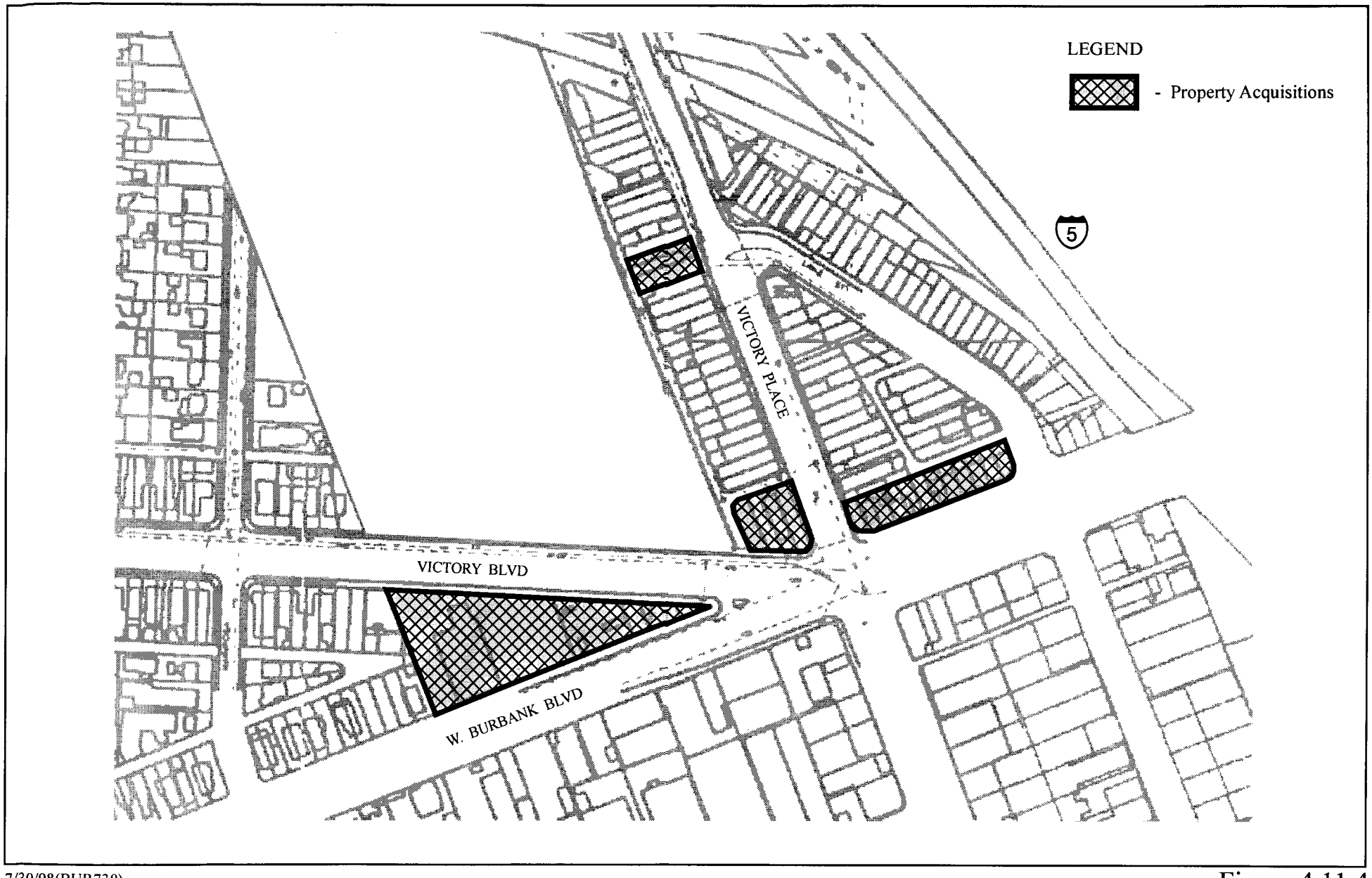
West Burbank Boulevard/North Victory Place Properties

Environmental investigations have been completed for properties along West Burbank Boulevard/North Victory Place that are to be incorporated into the proposed project site. These properties have been divided into three subareas: 1) the three southwestern properties at the "Five Points" intersection; 2) the four properties along the north side of the proposed extension of West Burbank Boulevard; and 3) the four parcels along the

west side of North Victory Place, known as the "Lake Street entrance" properties. These properties are depicted on Figure 4.11.4, and discussed in the following sections.

The Five Points Intersection Properties

Reports of Phase I Environmental Site Assessments (ESAs) were prepared by Gradient Engineers, Inc. (Gradient) on 923 and 1011 West Burbank Boulevard and 1001 West Victory Boulevard for the City of Burbank Redevelopment Agency. Gradient states that the ESAs were prepared in substantial conformance with ASTM Standard E 1527-97, which provides guidelines for conducting Phase I ESAs for commercial real estate transactions. These ESAs were completed in order to identify potential environmental issues from available historical records or research to maximize knowledge of previous site usage involving hazardous substances or petroleum products. Each ESA report provided a conclusion that Gradient found no evidence of a Recognized Environmental Condition (REC) at any of the three properties. However, a cover letter that accompanied each ESA report provided recommendations that additional research should be completed concerning regulatory agency file reviews on adjacent properties.



7/30/98(BUR730)

Figure 4.11.4

N

LSA No Scale

West Burbank Boulevard/North Victory Place Properties

923 West Burbank Boulevard

This property is currently occupied by a Chevron service station, and has been developed with former service stations since 1962. The property has contained at least three generations of underground storage tanks (USTs) containing fuel, one of which was located in the eastern portion of the site. Records indicate that contaminated soil was removed during the UST removal from the eastern portion of this property in 1985. Also, a dry cleaner was possibly located in a former building on the site, based upon the former site address listing in the 1952 City Directory of "Charnelle Cleaners" at 921 West Burbank Boulevard. Additional historical information indicated that the former presence of USTs or a dry cleaner may represent a potential REC on this property.

1011 West Burbank Boulevard

This property is currently occupied with a commercial building containing a State Farm Insurance office. Historical research indicates that the property may have been formerly occupied by a Shell gas station (in the eastern portion of this site). The 1953 through 1969 Sanborn Fire Insurance Maps show that this site was occupied with a gas and oil station, an auto repair facility, and a car wash. Additional historical information indicated that these former uses may represent a potential REC on this property. Based upon the reported age of construction of the current structure (circa 1978), it is conceivable that asbestos containing material (ACM) and lead based paint (LBP) may be encountered during redevelopment of this property.

1001 West Victory Boulevard

This property is currently developed with a restaurant building ("El Burrito Loco"), and has been occupied by restaurants since 1977. The former Lockheed Martin Corporation Plant B-1 B-199 Parcel is located west of this property. Previously, the property was developed with two structures, appearing to be commercial or industrial in nature, in 1954. Additional standard historical sources for former site addresses that are shown on the Sanborn Fire Insurance Maps indicate that the site was possibly occupied by a gasoline service station, which may represent a potential REC on this property. Based upon the reported age of construction of the current structure (circa 1977), it is conceivable that ACMs and LBPs may be encountered during redevelopment of this property.

Proposed Extension of West Burbank Boulevard Properties

Reports of Phase I ESAs for 101, 107, 111, and 123 West Burbank Boulevard were prepared by Gradient for the City of Burbank Redevelopment Agency. Gradient states that the ESAs were prepared in substantial conformance with ASTM Standard E 1527-97, which provides guidelines for conducting Phase I ESAs for commercial real estate transactions. These ESAs were prepared in order to identify potential environmental issues from available historical records or research to maximize knowledge of previous site usage involving hazardous substances or petroleum products according to ASTM Standard E 1527-97. Each ESA report concluded that Gradient found no evidence of a REC at any of the four properties. However, a cover letter that accompanied each ESA

report provided recommendations that additional research should be prepared concerning regulatory agency file reviews on adjacent properties.

123 West Burbank Boulevard

Since 1988, this property has been occupied by Burbank Animal Hospital and adjoining parking lot. Historical research indicates that the property was formerly occupied by a gasoline service station where USTs were removed in 1958, which may represent a potential REC due to the presence of the former UST. Based upon the reported age of construction of the current structure (circa 1978), it is conceivable that ACMs and LBPs may be encountered during redevelopment of this property.

111 West Burbank Boulevard

This property is currently occupied with a commercial building occupied by printing shop. Prior occupants of this building include manufacturing companies as early as 1968. The ESA did not include an inspection of the current structure, reportedly as a result of denied site access. Based upon the reported age of construction of the current structure (circa 1965), it is conceivable that ACMs and LBPs may be encountered during redevelopment of this property.

107 West Burbank Boulevard

This property is currently occupied by an office/commercial building, which contains a small machine shop. Prior occupants of this building include manufacturing companies, as early as 1954. The ESA did not include an inspection of the current structure reportedly as a result of denied site access. Based upon the reported age of construction of the current structure (prior to 1954), it is conceivable that ACMs and LBPs may be encountered during redevelopment of this property.

101 West Burbank Boulevard

This property is currently occupied with a light industrial/commercial building where a plastics manufacturing shop is operated. Prior occupants of this building include manufacturing companies and an animal hospital, as early as 1967. The ESA did not include an inspection of the storage shed, reportedly because it was locked. Based upon the reported age of construction of the current structure (prior to 1967), it is conceivable that ACMs and LBPs may be encountered during redevelopment of this property.

The Lake Street Entrance Properties

Two reports of Final ESAs were prepared by Harding Lawson Associates (HLA) for the four parcels located along the west side of North Victory Place, known as the "Lake Street entrance" properties which are proposed to be added to the project. One ESA covers the three northern parcels, located at 1043 and 1045 North Victory Place, and a northern adjacent paved parking area. The southern two of these three parcels are both

occupied with a single story building used by Craft Precision Products, a machine shop. The second ESA covers the southern adjacent parcel, located at 1041 North Victory Place, which is occupied with a single story building used by an auto/machinery shop. The Lockheed Martin Corporation B-199 subarea is located to the west, adjacent to these parcels.

HLA concluded in the ESA that RECs exist at the northern three parcels: 1) the site is located within the Burbank Operable Unit - Superfund site (see page 4.11-2); 2) hazardous materials have been stored and handled on this site; 3) several barrels with hazardous material placards were observed on the site; and 4) the site buildings may contain ACMs. (A subsurface investigation was performed in 1989 around a barrel storage area on the three northern parcels; however, detectable concentrations of VOCs were reportedly not found in the soil samples collected from the site.) HLA concluded in the second ESA report that RECs exist at the southern parcel: 1) the site is located within the Superfund site; 2) databases of regulatory agencies listed several impacted nearby properties; 3) oily black stains and a petroleum odor were observed on this site; 4) stains were observed on the ground immediately west of this parcel; and 5) the site buildings may contain ACMs. HLA recommended that an on-site reconnaissance be performed on these parcels to determine whether a subsurface environmental investigations (Phase II) are necessary.

4.11.2 STANDARD REGULATORY REQUIREMENTS

Standard Regulatory Requirement 11.1 Health & Safety Plan

The project applicant must prepare a Health and Safety Plan for all workers in accordance with federal, State, and local regulations, for use during construction, subject to review and approval by the Director of Community Development Department. Federal regulations include the following:

- Occupational Safety and Health, Title 29 Code of Federal Regulations (CFR), Regulations for General Industry (Part 1910) and Construction (Part 1926).

- Environmental Protection Agency (EPA), Title 40 CFR, National Emissions Standard for Hazardous Air Pollutants (NESHAPS), (Part 61, Subpart A).

- United States Department of Transportation (USDOT) Regulations, Title 49 CFR.

California State and local regulations include the following:

- Title 8 California Code of Regulations (CCR), California Occupational Safety and Health Administration (Cal-OSHA) Regulations, Chapter 4, Division of Industrial Relations, General Industry Safety Orders and Construction Safety Orders.

- Title 22 CCR, Social Security, Division 2, Department of Social Services - Department of Health Services, and Division 4, environmental Health.

- South Coast Air Quality Management District (SCAQMD), Rules and Regulations.

The Health and Safety Plan must include a summary of all potential risks to construction workers, monitoring programs, maximum exposure limits for all site chemicals, and emergency procedures. A Site Health and Safety Officer must be identified in the plan. The plan must specify methods on contact, phone number, office location, and responsibilities of the Site Health and Safety Officer. The Health and Safety Plan must specify that the Health and Safety Officer shall be contacted immediately by the contractor should any potentially toxic chemical be detected above the exposure limits, or if evidence of soil contamination is encountered during site preparation and construction. The City Fire Department is to be notified if evidence of soil contamination is encountered. Likewise, in accordance with the partial closure NFA letter from the LARWQCB, dated July 18, 1997, the LARWQCB "...must be notified and appropriate actions (e.g., determine extent, limit site worker exposure) must be taken if evidence of soil contamination are (sic) encountered during site redevelopment at the subject property." The Health and Safety Plan is required to be amended as needed if different site conditions are encountered by the Site Health and Safety Officer, or if any excavation for grading or building (e.g., overexcavation of soils, foundations, utility installation, foundation preparation, or pre-drilling for deep foundations, etc.) exceeds a depth of ten feet. The City of Burbank Director of Community Development Department will monitor compliance with the amendment process.

The developer is required to provide funding of an on-site monitor to perform monitoring and/or soil and air sampling during grading, trenching, cut or fill operation, and the monitor shall be allowed inspection of developer's monitoring and testing under the direction of the City of Burbank to ensure that surface soil conditions, conditions of exposed soils, and air conditions are safe and acceptable for on-site workers, as well as residents and workers of properties adjacent to the site. The monitor should also be responsible for monitoring compliance with mitigation related to dust control, included in Section 4.3, Air Quality. The developer, monitor, or other developer designated entity should be responsible for preparing and submitting weekly activity reports and testing results to the Director, Community Development. The developer is required by these existing regulations to stop, redirect, or otherwise change the grading work or other subsurface trenching, drilling and/or subsurface disturbance, so as to avoid areas of observed or monitored contamination, including contamination of the air by VOCs.

Standard Regulatory Requirement 11.2 Storm Water Pollution Prevention Plan (SWPPP) During Construction

The project applicant is required to prepare a Storm Water Pollution Prevention Plan (SWPPP) for the construction of the proposed project in accordance with California State Water Resources Control Board Order No. 92-08-DWQ, which requires the issuance of a National Pollution Discharge Elimination System (NPDES) permit for the project. The NPDES permit is required by federal regulations 40 CFR, Parts 122, 123 and 124. The SWPPP shall be submitted to the LARWQCB for approval (see Section 4.4), and shall include a surface water control plan and erosion control plan to the satisfaction of the City of Burbank Director of Public Works, pursuant to City of Burbank Grading Ordinance. The SWPPP must specify toxic materials (in significant quantities) known to exist on the site; areas of storing, cleaning, and maintaining

construction materials and equipment; Best Management Practices (BMPs) for controlling stormwater and non-stormwater discharges and contact with equipment and materials; and sampling and analysis for key chemicals of concern. The SWPPP must include provisions to control potential impact from off-site discharges of stormwater and non-stormwater that would come into contact with equipment, materials, and chemicals of concern on site during construction. Prior to obtaining a grading permit, the project applicant is required by these regulations to provide documentation that the SWPPP was approved by the LARWQCB, and shall provide a copy of the permit, including all conditions, to the City of Burbank Director of Public Works.

Standard Regulatory Requirement 11.3 Handling and Storage of Hazardous Substances/SCAQMD Permits for New Air Contamination Source

Federal, State, and local codes for the handling and storage of any hazardous substances, including petroleum hydrocarbons, are to be followed at all times. This requirement shall apply both during construction and throughout the length of the project. These include proper storage and spill containment procedures. Prior to issuance of any building permits, the project applicant shall obtain permits from the City of Burbank Fire Department and any other applicable regulatory agency for the storage or handling of any hazardous substances. Prior to the issuance of any building permit, the project applicant shall provide documentation to the satisfaction of the City of Burbank, Director of Community Development Department, that all future tenants will likewise be required under their leases to fully comply with the applicable federal, State, and local codes (specific codes are identified below) for the handling and storage of hazardous substances. Hazardous substances include retail size containers of spray paint, solvents, automotive lubricants, cleaners, turpentine, paint-strippers, etc., typically found in automotive supply stores, hardware stores, and warehouse stores. Compliance with applicable federal, State, and local codes will ensure the safety of workers, and the public is protected from inadvertent exposure to these hazardous substances.

Prior to issuance of a business license and/or occupancy permit, any tenant storing or handling hazardous materials must submit an Emergency Response Business Plan in accordance with 29 CFR Part 1910.1200, 40 CFR Part 302, California Health & Safety Code (H&S Code) Sections 25500 through 25545, and California Labor Code Sections 6382 and 6390 to the City of Burbank Fire Department for approval and permit. This Business Plan must include an Inventory List, Emergency Action Plan in accordance with the Community Right-to-Know (Proposition 65) notification. Minimum thresholds of hazardous materials requiring preparation of a Business Plan are for businesses storing at least 55 gallons (aggregate total), 500 pounds, or 250 cubic feet of compressed gas. There are additional requirements, including the preparation of a Risk Management and Prevention Program (RMPP) in accordance with H&S Code Section 65850.1, if any business will store or handle Regulated Materials (formerly known as Extremely Hazardous Substances) in quantities above the "Reportable Quantity" list in Appendix A of Part 355 of Subchapter J of Chapter I of Title 40 CFR.

The permit and storage requirements of underground storage tanks (USTs) for petroleum hydrocarbons are covered by regulations in Sections 53 and 55 of the Federal Register, 40 CFR Parts 280 and 281, H&S code 25280 through 25299, and 23 CCR Section 2630 through 2635 and 2805 through 2809. Permits, installation oversight and monitoring will also be required by the City of Burbank Fire Department, as part of these regulations. A

permit to operate will also be required by the SCAQMD for all gasoline storage or retail sales.

Uses which may emit air contaminants or air toxics may also require registration or a permit to operate from the SCAQMD in accordance with Rule 219 for using process material or air contaminant. Depending upon equipment and amount of air contaminants used in the process, these uses may include: dry cleaners, film or photo processing, car wash, or automotive paint booths.

Standard Regulatory Requirement 11.4 Emergency Action Plan/Facilities Impact Plan

The project applicant is required to provide documentation, to the satisfaction of the Director, Burbank Department of Public Service, that the LARWQCB has received the development plans for the proposed project, and that LARWQCB has not objected thereto, in order to ensure that the project will not hinder full compliance with their monitoring and closure requirements for any of the remedial facilities on the project site. These facilities include the existing groundwater monitoring wells and extraction discharge system located along the southern boundaries of the former Plant B-1 and the existing VES, VMPs, and vaults in the B-1 Central subarea.

Emergency Action Plans are required to be prepared by the project applicant addressing responsible actions required in the event of damage to groundwater extraction and discharge systems along the southern boundary of the former Plant B-1 property and the existing VES, VMPs, and vaults in the B-1 Central subarea. This plan is required to be approved by the LARWQCB and Burbank Director of Public Service prior to initiating grading activities.

Standard Regulatory Requirement 11.5 Identification of All Easements on Parcel Maps

In connection with the sale of the property to the Zelman Companies, Lockheed Martin Corporation is retaining an easement over the property to enable continued operation and maintenance of the existing VES and groundwater monitoring facilities. The easement also provide Lockheed Martin Corporation the right to enter onto any portion of the property to comply with any current or future governmental orders relating to cleanup of the site. The easement expires in 2030 or ten years after the date that all of Lockheed Martin Corporation's remediation work is completed, whichever is later.

Development plans and parcel maps locating all easements on the site are required by City and State subdivision codes. Prior to approval of the Tentative Parcel Map by the City, documentation to the satisfaction of the City of Burbank Public Service Department (PSD) providing easements for free access by the City, having locations and dimensions acceptable to the City, for each of four wells. In addition, an access drive to each well location, acceptable to the City, is to be maintained (see also discussion in Section 4.1, regarding easements).

4.11.3 THRESHOLD OF SIGNIFICANCE CRITERIA

Impacts to public health and safety were generally assessed using a qualitative approach, with certain impacts assessed using a quantitative approach. The identified impacts have been placed into three categories: less than significant, potentially significant, and significant.

Less than significant impacts are those identified impacts that do not represent a chemical exposure that would negatively impact public health due to the implementation of standard requirements and the proposed uses/features of the project. An example of a less than significant impact is storage of small quantities of hazardous materials by the future occupants of the proposed project in accordance with all applicable regulations.

Potentially significant impacts are potential human exposures to chemicals resulting in a health risk less than $1x10^{-6}$ (i.e, one in a million), the accepted regulatory criterion used to define risk in relation to human health impacts, or having a relatively low probability of occurrence if properly controlled via current government agency regulations.

Significant impacts are defined herein as those identified impacts that would represent a significant risk to human health greater than the criterion of one in a million, even with agency oversight and implementation of the standard requirements identified in Section 4.11.2.

4.11.4 IMPACTS

An evaluation of identified potential short-term and long-term impacts to public health and safety was made for the proposed project based on the threshold criteria in Section 4.11.3.

Impacts to public health and safety were assessed using a qualitative approach. Much of this assessment relied upon data and risk calculations by others as summarized in Section 4.11.1. The results of this qualitative assessment indicated only two potentially significant impacts to public health, principally from the properties along West Burbank Boulevard/North Victory Place that are to be incorporated into the proposed project site (see Section 4.11.4). The consideration of the impacts as potentially significant stems from undefined possible contaminants on the West Burbank Boulevard/North Victory Place properties. However, with the implementation of Mitigation Measures 4.11-1 and 4.11-2, the potential impacts are considered to be less than significant. Numerous environmental investigations and remedial activities have been conducted at the former Plant B-1 portion of the project site. Based upon available analytical results, residual concentrations of chemicals that are anticipated to be encountered during project construction are believed to represent a less than significant health risk; however, the possibility to encounter some elevated levels of chemicals cannot be entirely ruled out. With the implementation of the Standard Regulatory Requirements, the potential health impacts are considered to be less than significant.

Less than Significant Impacts

As proposed, there are no pathways identified for long-term exposure to residual concentrations of chemicals on site. There are no less than significant impacts to public health and safety due to implementation of the proposed project, provided the Standard Regulatory Requirements are followed (see Section 4.11.2).

Potentially Significant Impacts

Easements for Water Extraction System Vaults

In the future, the water extraction system well vaults, currently maintained by Lockheed Martin Corporation, will become facilities of the City of Burbank Water Department. According to Robert Simpson with Lockheed Martin Corporation, the well vaults were constructed to handle truck traffic. Seven vaults were constructed under the same contract, and were constructed to the same specifications. Three of these vaults were constructed within nearby streets and are subjected to truck traffic. In order to avoid a potentially significant impact, the well vaults along the southern property line will be required to have access easements between the property owner and the City of Burbank with specific requirements for access easements (letter, DRC, August 21, 1998).

Construction Impacts

The possibility of potential short-term health risks to construction workers and the adjacent community occurring during redevelopment of the West Burbank Boulevard/North Victory Place properties could not be ruled out, without implementation of mitigation measures. It is conceivable that some of the existing structures on these properties structures may contain ACMs, LBPs, and/or PCBs, which will require air monitoring and control to prevent potential short-term health risks to construction workers and the adjacent community during demolition of structures.

Former uses on some of these properties may have involved hazardous materials that possibly resulted in contamination, although this is considered unlikely at this time. It is conceivable that if contamination is subsequently found on these properties, it may require remediation and control to prevent potential short-term health risks to construction workers and the adjacent community. Implementation of Mitigation Measures 11.1 and 11.2, below, is required to reduce these identified potential short-term impacts to a less than significant level.

An evaluation of these identified potential short-term construction related impacts was made individually for Options A, D1-A, and D1-B of the proposed project based on the threshold criteria in Section 4.11.3. The evaluation indicated that the proposed development differences between the options did not produce significant differences in the identified potential impacts to public health and safety. In other words, the level of potential significance anticipated with each identified impact to public health and safety did not change with the proposed uses of the project options. This is due to the nature of the undefined contaminants possibly existing on the properties that may be encountered during redevelopment irrespective of the proposed uses of the properties, which are also individually similar between the project options. For example, demolition

of the existing structures on these properties may involve removal of ACMs regardless of which project option is considered. In other words, the same proposed mitigation measures apply equally to the three options.

Significant Impacts

There are no significant impacts to public health and safety due to implementation of the proposed project provided the Standard Regulatory Requirements are followed (see Section 4.11.2).

4.11.5 MITIGATION MEASURES

The following mitigation measures have been identified to reduce or eliminate the identified potential short-term impacts resulting from possible existing contamination on these properties during construction activities:

11.1 Prior to issuance of any demolition, grading, or street work permits for the Five Points project or the Lake Street Access, the City of Burbank Public Works Department shall provide documentation that additional standard historical sources were researched in accordance with ASTM E 1527-97 to identify any additional unknown prior uses on purchase properties along West Burbank Boulevard/North Victory Place to be added to the project, including (but not limited to) aerial photographs dating back to 1928, fire insurance maps (Burbank Fire Department), and local street directories for all former site addresses. Current site usage shall be documented through inspection of structures and open areas on these properties for the presence, handling, or storage of hazardous substances or petroleum products. Documentation shall be provided that limited or pre-demolition surveys for ACMs and LBPs (including sampling and analysis of all suspected building materials) and inspections for PCB containing electrical fixtures were completed on these properties. All inspections, surveys, and analyses shall be performed by appropriately licensed and qualified individuals in accordance with applicable regulations (e.g., ASTM E 1527-97, and 40 CFR, Subchapter R, Toxic Substances Control Act [TSCA], Part 716). All identified ACMs, LBPs, and PCB containing electrical fixtures shall be removed, handled, and properly disposed of by appropriately licensed contractors according to all applicable regulations during demolition of structures (40 CFR, Subchapter R, TSCA, Parts 745, 761, 763). Air monitoring shall be completed by appropriately licensed and qualified individuals in accordance with applicable regulations both to ensure adherence to applicable regulations and to provide safety to workers and the adjacent community (e.g., SCAQMD). The Public Works Department shall provide documentation (including all required waste manifests, sampling and air monitoring analytical results, etc.) that abatement of any ACMs, LBPs, or PCB containing electrical fixtures identified on these properties has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies) (40 CFR, Subchapter R, TSCA, Parts 716, 745, 761, 763, 795).

Documentation shall be provided to demonstrate that Phase II Environmental Site Assessments (ESAs), including a geophysical survey and/or subsurface

exploration, sampling, and environmental laboratory analyses (as described in ASTM E 1903-97), were completed in all areas of RECs on the street realignment and access purchase properties along West Burbank Boulevard/North Victory Place. The necessity for Phase II ESAs shall be based upon the presence of any potential REC on these properties identified in the Phase I ESA, suspected from the results of the required additional historical research (to comply with in accordance with ASTM E 1527-97), or observed during site inspections. All Phase II ESAs shall be completed in accordance with the latest updated version of applicable portions of the California Regional Water Quality Control Board-Los Angeles Region (LARWQCB), "Interim Site Assessment and Cleanup Guidebook" dated May, 1996, and the latest updated version of applicable portions of the California EPA-Department of Toxic Substances Control (DTSC), "Guidelines for Hydrogeologic Characterizations of Hazardous Substance Release Sites," Volumes 1 and 2, and "Drilling, Coring, Sampling and Logging at Hazardous Substance Release Sites." Prior to issuance of any grading or building permits for the project, the permit applicant shall provide documentation that a remedial plan to mitigate any contamination identified on the Lake Street access/Five Points realignment purchase properties along West Burbank Boulevard/North Victory Place has been submitted to, and approved by, the appropriate regulatory agency (e.g., LARWQCB or DTSC). Costs and responsibilities assigned to the City and the developer associated with the above required documentation, site remediation, and permitting shall be as agreed to in the Development Agreement. The Director, Public Works Department, shall be responsible for implementation and appropriate documentation of this measure.

11.2 Prior to public utilization of the Lake Street access or the affected areas of the Five Points Intersection realignment purchase parcels for street purposes required for development on the B-199 Subarea, the City shall provide documentation (including all required waste manifests, sampling, and monitoring laboratory analytical results, etc.), to the satisfaction of the Director, Public Works Department, that remediation of any contamination or wastes identified on the properties along West Burbank Boulevard/North Victory Place to be added to the project, as identified by the actions required in Mitigation Measure 11.1, has been completed in full compliance with all applicable regulations and approved by the appropriate regulatory agency(ies).

4.11.6 CUMULATIVE IMPACTS

As a Responsible Party (RP) within the Burbank Operable Unit (OU), Lockheed Martin Corporation has participated in the groundwater cleanup plan for the OU, and installed groundwater extraction and monitoring wells within the project site to address their responsibilities under the plan. Other RPs within the OU are also required to implement their responsibilities under the Plan. Since the proposed project does not include uses that would generate or use substantial amounts of hazardous waste, and since on-site drainage will not be allowed to percolate into the ground, the potential that the proposed project would further degrade groundwater beneath the project site is considered negligible; therefore, the proposed project would not contribute to a cumulative impact on the existing quality of the groundwater.

Known contamination with respect to groundwater impacts beneath the project site is being remediated under the mandate of the LARWQCB. Other properties within the City with known hazardous waste contamination are required to remediate their contamination in accordance with federal and State regulations. Since the proposed project does not include uses that would generate or use substantial amounts of hazardous waste, and since construction activities or site operation will not cause additional short-term or long-term health risks (after implementation of the measures identified in this section), potential cumulative public health and safety impacts are considered negligible, and are less than significant.

4.11.7 LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of the mitigation measures presented in Section 4.11.6, the identified potential public health and safety impacts have been reduced to below the level of significance.

Conclusion

Strict adherence to the Project Description in Section 3, Standard Regulatory Requirements in Section 4.11.2 and mitigation measures provided in Section 4.11.5 will reduce the identified and evaluated potential public health and safety impacts to below the level of significance.